NM STATE UNIVERSITY

Calculating Depreciation

Circular 658

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Cooperative Extension Service • College of Agricultural, Consumer and Environmental Sciences

Performing the mathematical steps to calculate depreciation is not difficult, but small computational errors can have large tax consequences. As a result, each farmer and rancher should know how depreciation is calculated and understand the effect depreciation methods can have on taxable income, even if a professional tax practitioner recalculates the figures for the tax return.

BASIS IN PROPERTY

Despite the fact that they have long lives, are requirements of production, and have fairly high purchase prices, certain long-lived assets cannot be depreciated for income tax purposes, and should not be depreciated for business analysis purposes. Nondepreciable, long-lived assets generally fall into one of three major categories:

1. Land
2. Personal or nonbusiness assets
3. Assets that have no basis

Depreciation, for tax purposes and for analysis purposes, is reserved for business assets with a determinable or finite useful life. Thus, land is not depreciated because it is generally assumed to have an infinitely long useful life. When we spread a finite cost over an infinite number of years, the amount to be allocated to any one year becomes zero. Nonbusiness assets such as personal automobiles, personal residences, and furniture are not depreciable, even though their resale value also declines through time.

Assets that have no basis make up the third category of nondepreciable assets, and are probably the most difficult to explain and understand. The first problem is to understand the concept of basis. The basis of any piece of property is equal to the amount of money and/or the value of any other goods and services paid or given in exchange for that property. The adjusted basis is the original basis minus any accumulated depreciation taken. For a piece of property to have no basis, then, means that nothing was directly paid for the property. An example of property with no basis is raised livestock. Technically, no raised livestock has a basis because nothing was actually paid for the newborn animal. Certainly there were costs attributable to the production of that animal, such as the feed costs, veterinary bills, and other costs that went into maintaining its mother. But for a cash-basis taxpayer, those costs were written off as expenses in the year in which they were incurred. Consequently, no purchase price is left to be attached to the newborn animal. Because there is no purchase price, there really is nothing to depreciate. If the costs were accumulated on an accrual basis and not expensed in the year paid, then the amount of those costs could be depreciated. But for a cash-basis taxpayer, depreciation would not be taken. Although this may seem harsh at the moment, the process really benefits the cash-basis taxpayer in the long run because the costs are expensed immediately rather than spread over a period of years. If you hold the gift as business property, your basis for figuring any depreciation, depletion, or amortization deduction is the same as the donor's adjusted basis plus or minus any required adjustments to basis while you hold the property.

Basis in property is equal to the amount of money and/or value of any other goods and services paid or given in exchange. It is the basis value that will be depreciated, not just the amount of cash paid.

Consider the following examples:

Asset Purchase 1

Tractor purchased on September 1, 19X1.
Original list price was $58,000. The seller agreed to accept $50,000 in cash, $4,000 in grain, and $2,000 in labor services for the tractor.
Basis:
$50,000 cash[2] + $4,000 goods + $2,000 services = $56,000

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[2]The amount of cash offered in this type of arrangement is often called the cash boot.

Asset Purchase 2

Combine purchased on October 1, 19X1.
Original list price was $75,000. The seller agreed to accept $60,000 in cash and a used combine, which was determined to have a fair market value of $12,000. The remaining value of the combine in the owner's depreciation records was $4,000.
Basis: $60,000 cash + $4,000 remaining value = $64,000

This basis calculation for asset purchase 2 seems at first glance to be strange, but the reason for doing it this way is to avoid paying tax on the gain on the old combine. The owner's depreciation records indicate the remaining value of the combine is $4,000, but the owner could sell it for $12,000. There is, consequently, an $8,000 gain, which would be taxable income if the combine was sold. To avoid taxation of that gain, the farmer could roll over that gain into the new combine. In essence, this will recognize the gain at a later time.

The basis calculated can be viewed in an alternative way:

Negotiated selling price	= $72,000
Price paid in cash	= $60,000
+ Price paid in property	= $12,000
= Total price paid	= $72,000

So the seller receives $72,000 worth of cash and machinery for the new machine. But, to avoid taxation of the gain, the buyer subtracts that gain:

Total price paid	= $72,000
Minus gain	= -$8,000
Basis	= $64,000

The farmer would consequently place the new combine on the depreciation schedule at a basis of $64,000 and calculate depreciation on that amount, but would list the market value of the machine at $72,000.

This process of not recognizing gain on items traded in is called a nontaxable exchange. In most instances, this process works to the advantage of the taxpayer, but it is not a matter of choice. That is, the owner of the property being traded in must handle the transaction in this manner; the owner cannot choose or elect to recognize and pay tax on the $8,000 gain and depreciate a $72,000 machine. The basis must be calculated to be $64,000.

Suppose the farmer sees this trade coming and decides to recognize the gain and depreciate the full amount of the negotiated purchase price. The farmer arranges to sell the old combine for $12,000, either to the dealer or to a third person, then later pays the dealer $72,000 in cash.

Even under these circumstances, the basis in the new combine is $64,000 because the Internal Revenue Service sees this sale and purchase as being in fact a trade. Generally, a sale and purchase of like-kind property occurring within a 60-day period is viewed as a trade for tax purposes.

Asset Purchase 3

Plow purchased from a neighbor. The negotiated price was $5,000. The buyer paid $3,000 in cash and traded a bull having a fair market value of $2,000 and a book value of $1,000.
Basis: $3,000 cash + $2,000 bull = $5,000

The purchase of asset 3 illustrates a limitation to the nontaxable exchange concept. Because the bull and the plow are not like-kind property, the transaction is viewed as a sale and purchase and a taxable exchange. Therefore, the plow buyer would depreciate a $5,000 plow and pay tax on a $1,000 gain on the sale of the bull.

The key to determining whether the trade was taxable or a nontaxable exchange lies in the definition of like-kind property. Exchanges or trades of like-kind property are nontaxable, while trades of non-like-kind property are taxable. The IRS has defined like-kind to refer to the nature, character, use, or purpose of the property. Any truck or any other machine is like-kind property as to any other machinery. A trade of farmland for apartment buildings or timberland is also a like-kind exchange because all of these forms of property are held to generate income. However, a trade of machinery for land, livestock of one sex for those of the other sex, an old bull for a young bull, and other such trades are not like-kind. The IRS rules are strict and should be checked before handling the transaction either as a taxable or a nontaxable exchange.

OLD DEPRECIATION METHODS: PRE-1981

Three major depreciation methods were recognized by the IRS for purchases of depreciable assets before 1981: straight line, sum-of-years digits, and declining balance methods. To calculate depreciation under any of the methods, several pieces of information are needed, including date of purchase, salvage value, and useful life. It is also necessary to know whether additional first-year depreciation was taken.

From this list, only the straight line method remains an option for new purchases. Also, items bought before 1981 cannot be changed to the new depreciation methods that will be discussed later. However, it is likely that

each established farm and ranch will continue to depreciate some items under the old methods.

Because very few opportunities to make a choice remain under current law, it is no longer imperative to discuss the advantages and disadvantages of each method, or to discuss criteria for selecting the appropriate useful life or salvage value. Simply put, the time to make depreciation decisions has passed us by; those decisions must be made in the year of purchase. Under each method, be careful to not depreciate below the salvage value originally specified.

Straight Line Method

To calculate depreciation under the straight line method, simply divide the number of years of useful life into the depreciable balance (purchase price minus salvage value).

$$\text{Depreciation} = \frac{\text{Purchase Price - Salvage Value}}{\text{Years of Useful Life}}$$

As implied by the name, the amount of depreciation taken is the same in each year of the selected useful life, assuming the asset was held for the entire year. If the asset was only held for a portion of the year (as in the year of purchase or year of sale), the amount of depreciation claimed during that year must be adjusted. The adjustment process is simple: multiply the full-year depreciation amount by a fraction representing the portion of the year the asset was held. For example, if the asset was purchased March 1, multiply the full-year depreciation amount by 10/12, or if the asset was sold September 1, multiply the full-year depreciation amount by 8/12.

Sum-of-Years Digits Method

Depreciation calculations under the sum-of-years digits (SYD) method are only slightly more complicated. First, the SYD factor shown below must be calculated by adding the digits of the years in the useful life. For example, if a 5-year useful life was specified, the factor would be 1 + 2 + 3 + 4 + 5 = 15. Depreciation would then be calculated using 5 for YR in the first year, 4 for YR in the second year, 3 in the third, and so on.

$$\text{Depreciation} = \frac{\text{YR(Purchase Price - Salvage Value)}}{\text{SYD Factor}}$$

Like the straight line method, if the asset was held for a portion of the year, the amount of depreciation claimed must be adjusted. However, each year following a during-the-year purchase must also be adjusted. The adjustment process will be illustrated in a later example, but for now just accept that the adjustment process is awkward—so awkward, in fact, that most practitioners avoid the SYD method entirely.

Declining Balance Method

To calculate depreciation under the declining balance method, you must first know the rate at which depreciation was to take place. Those rates were specified as a maximum allowed for various classes of assets and included 1, 1.25, 1.5, 2, or any rate less than those. The rate chosen at purchase must now stand for the remaining years of useful life for each asset. Typically, the rate chosen for machinery was 2, which lead to the name double declining balance.

In year one, depreciation was calculated as:

$$\text{Depreciation} = \text{Rate(Purchase Price)} / \text{Useful Life}$$

At the end of year one, the remaining value was calculated as:

$$\text{Remaining Value} = \text{Purchase Price} - \text{Depreciation}$$

In year two, depreciation was calculated as:

$$\text{Depreciation} = \text{Rate(Remaining Value)} / \text{Useful Life}$$

A new remaining value was calculated by subtracting current depreciation from the last remaining value. All succeeding years are calculated in the same manner. Notice that salvage value is not used in the equations anywhere, but the remaining value can never fall below the specified salvage value. Furthermore, the rate chosen and used in the equations will not change throughout the useful life.

Similar to the previous two methods, the declining balance computation must be adjusted for assets held less than a full year. Like straight line, the adjustment process is simple and involves only multiplication of the full-year depreciation amount by a fraction representing the portion of the year the asset was held.

Switch to Straight Line

At any time during an asset's useful life, you may change (without any formal approval) from an accelerated depreciation method to straight line. This option can be particularly useful if a low salvage value was selected along with the declining balance method. In this situation, a surprising result often happens: The method needs more years than the originally specified useful life to depreciate to salvage value. To avoid a long period of low depreciation deductions, switch to straight line.

Numerical Example

To illustrate the mechanics of these three depreciation methods, consider example asset purchases 4 and 5. These two depreciation problems are solved in Tables 1 and 2.

Table 1. Depreciation Analysis of Asset Purchase 4

Asset 4 Straight Line

Purchase Price: $50,000; Salvage Value: $5,000; Useful Life: 5 years

Year	Remaining Value, Beginning of Year	Depreciation	Remaining Value, End of Year
19X0	$50,000	($50,000 - $5,000)/5 yr = $9,000	$41,000
19X1	$41,000	($50,000 - $5,000)/5 yr = $9,000	$32,000
19X2	$32,000	($50,000 - $5,000)/5 yr = $9,000	$23,000
19X3	$23,000	($50,000 - $5,000)/5 yr = $9,000	$14,000
19X4	$14,000	($50,000 - $5,000)/5 yr = $9,000	$5,000
19X5	$5,000	$0	$5,000

Asset 4 Sum-of-Years Digits

Purchase Price: $50,000; Salvage Value: $5,000; Useful Life: 5 years

Year	Remaining Value, Beginning of Year	Depreciation	Remaining Value, End of Year
19X0	$50,000	5/15* x ($50,000 - $5,000) = $15,000	$35,000
19X1	$35,000	4/15 x ($50,000 - $5,000) = $12,000	$23,000
19X2	$23,000	3/15 x ($50,000 - $5,000) = $9,000	$14,000
19X3	$14,000	2/15 x ($50,000 - $5,000) = $6,000	$8,000
19X4	$8,000	1/15 x ($50,000 - $5,000) = $3,000	$5,000
19X5	$5,000	$0	$5,000

* SYD Factor: 1 + 2 + 3 + 4 + 5 = 15

Asset 4 Double Declining Balance

Purchase Price: $50,000; Salvage Value: $5,000; Useful Life: 5 years

Year	Remaining Value, Beginning of Year	Depreciation	Remaining Value, End of Year
19X0	$50,000	2/5** x $50,000 = $20,000	$30,000
19X1	$30,000	2/5 x $30,000 = $12,000	$18,000
19X2	$18,000	2/5 x $18,000 = $7,200	$10,800
19X3	$10,800	2/5 x $10,800 = $4,320	$6,480
19X4	$6,480	2/5 x $6,480 = $2,592 or $1,480***	$5,000
19X5	$5,000	$0	$5,000

** Double declining balance implies rate = 2.

*** Cannot depreciate below salvage value.

Asset Purchase 4

Tractor purchased for $50,000 on January 1, 19X0. Useful life selected to be 5 years, salvage value selected to be $5,000.

Asset Purchase 5

Truck purchased for $20,000 on July 1, 19X0. Useful life selected to be 3 years, salvage value selected to be $5,000.

COST RECOVERY SYSTEMS

Since January 1, 1981, all purchases of depreciable assets fall under the Cost Recovery System (CRS). The CRS nullifies the direct use of all depreciation methods except straight line, but only for purchases made after December 31, 1980. Purchases made before January 1, 1981 are continued on the same system as was selected in the year of purchase. The cost recovery system was first introduced by the Economic Recovery Tax Act of 1981 for depreciable asset purchases as the Accelerated Cost Recovery System (ACRS) to help reach macroeconomic goals.

Major changes have been made several times since 1981: The Tax Equity and Fiscal Responsibility Act of 1982 lengthened the useful lives of real estate. The Tax Reform Act of 1986 lengthened useful lives but accelerated the depreciation rate; in fact, it changed so many of the details that we began referring to the new system as

Table 2. Depreciation Analysis of Asset Purchase 5

Asset 5 Straight Line

Purchase Price: $20,000; Salvage Value: $5,000; Useful Life: 3 years

Year	Remaining Value, Beginning of Year	Depreciation	Remaining Value, End of Year
19X0	($20,000)	($20,000 - $5,000)/3 yr x 1/2* = $2,500	$17,500
19X1	$17,500	($20,000 - $5,000)/3 yr = $5,000	$12,500
19X2	$12,500	($20,000 - $5,000)/3 yr = $5,000	$7,500
19X3	$7,500	($20,000 - $5,000)/3 yr x 1/2* = $2,500	$5,000
19X4	$5,000	$0	$5,000

*1/2 year allowed

Asset 5 Sum-of-Years Digits

Purchase Price: $20,000; Salvage Value: $5,000; Useful Life: 3 years

Year	Remaining Value, Beginning of Year	Depreciation	Remaining Value,; End of Year
19X0	($20,000)	3/6** x ($20,000 - $5,000) x 1/2 = $3,750	$16,250
19X1	$16,250	3/6 x ($20,000 - $5,000) x 1/2 + 2/6 x ($20,000 - $5,000) x 1/2 = $3,750 + $2,500 = $6,250	$10,000
19X2	$10,000	2/6 x ($20,000 - $5,000) x 1/2 + 1/6 x ($20,000 - $5,000) x 1/2 = $2,500 + $1,250 = $3,750	$6,250
19X3	$6,250	1/6 x ($20,000 - $5,000) x 1/2 = $1,250	$5,000
19X4	$5,000	$0	$5,000

** SYD Factor: 1 + 2 + 3 = 6

Asset 5 1.5 Declining Balance

Purchase Price: $20,000; Salvage Value: $5,000; Useful Life: 3 years

Year	Remaining Value, Beginning of Year	Depreciation	Remaining Value, End of Year
19X0	($20,000)	1.5/3 x $20,000 x 1/2 = $5,000	$15,000
19X1	$15,000	1.5/3 x $15,000 = $7,500	$7,500
19X2	$7,500	1.5/3 x $7,500 = $3,750 or $2,500***	$5,000
19X3	$5,000	$0	$5,000

*** Cannot depreciate below salvage value.

Modified ACRS (MARCS). Furthermore, the Drought Relief Assistance Act of 1988 lowered depreciation rates for farm and ranch properties because Congress wanted the agricultural industry to pay for the funds expended to help drought-stricken farmers in 1988.

How Cost Recovery Works

Despite the myriad laws and changes that make depreciation calculations difficult to understand, all of the various cost recovery system forms are similar. Initially, the cost recovery system was implemented to simplify computations and IRS verification of depreciation deductions claimed by taxpayers. In many respects, cost recovery has done just that. Salvage value as a concept was eliminated (all salvage values for depreciation calculation purposes are now assumed to be zero), and a specific useful life has been assigned to every depreciable asset. Consequently, the owner or his/her accountant can no longer select a useful life that either fits a particular individual's situation or helps plan current and future depreciation deductions. Instead, each asset is assigned a specific useful life by placing it in one of a small number of asset classes. Furthermore, the depreciation method is selected for you—no choice between sum-of-years digits, declining balance, or straight line remains, at least in theory. Certainly no choice remains with respect to the title at which depreciation is calculated and claimed.

Lastly, the cost recovery methods now mandate a mid-year purchase assumption and specify that partial annual depreciation can be claimed in the year of sale.

Table 3. ACRS Percentages for 3-, 5-, and 10-year Property Classes

Recovery Period	3-Year Property	5- Year Property	10-Year Property
1st Year	25%	15%	8%
2nd Year	38%	22%	14%
3rd Year	37%	21%	12%
4th Year	—	21%	10%
5th Year	—	21%	10%
6th Year	—	—	10%
7th-10th Year	—	—	9%

The mid-year convention, an option before 1981, is now obligatory—regardless of the date of purchase, you claim one-half year's depreciation in the year of purchase. In other words, whether you purchased the asset on January 1 or December 31, or any date in between, you claim depreciation as if you purchased it on July 1. (We will need to raise this issue again with respect to a mid-quarter convention under MACRS.)

The Internal Revenue Code did leave in one depreciation option, the Alternate Depreciation System (ADS). It simply offers a straight line alternative to the more rapid, or accelerated, cost recovery system. Even though this choice of method is available, salvage value is still ignored, useful life is still pre-specified, and the mid-year convention must still be used.

How ACRS Works

The ACRS was the first cost recovery system developed and it applied to all purchases in 1981 through 1986 (after December 31, 1980, and before January 1, 1987). The ACRS specified four property classes: 3-year property (cars, light trucks, breeding swine), 5-year property (farm machinery, special purpose buildings), 10-year property (manufactured housing), and 15-year property (depreciable real estate). The 15-year class was later stretched to 18 years (for property placed in service after March 15, 1984) and then to 19 (for property placed in service after May 8, 1985). The ACRS follows the previously available procedure of 150% declining balance depreciation, then switches to straight line after a few years. Half the full year's allowance is built into the rates for the first year, regardless of when the property was purchased during the year.

Other choices under ACRS include selection of straight line depreciation over the same recovery period for this class as if the accelerated rates were used, or over one of the longer allowable periods. The same election must to be made on all items in a given class (all assets have the same depreciation period) purchased during the year. In other words, if you bought a tractor and some dairy cows and installed a sprinkler irrigation system in the same year, you had to use the same recovery period and method for all three. However, an item-by-item election could be made on 15-year property. When 3- or 5-year class assets are disposed of, any gain, to the extent of prior depreciation taken, must be recaptured as ordinary income. Any gain in excess of prior depreciation is treated as capital gain. On 15-year property (as well as 18-year and 19-year property) where the straight line method was used, all gain will be treated as capital gain. If the accelerated rates are used on 15-year (18- and 19-year) non-residential property (e.g., a general purpose barn), any gain will be subject to recapture to the extent of depreciation taken. If the accelerated rates are used on residential property (e.g., a rented house), recapture as ordinary income will be limited to the extent that deductions exceed allowable deductions under the straight line method over the 15-, 18-, or 19-year period. Tables of percentages are provided to compute annual depreciation amounts (see Table 3 for 3-, 5-, and 10-year percentages and Table 4 for 15-, 18-, and 19-year percentages). The accelerated rates shown in the tables are spelled out in the law, so all you do is multiply them by your original basis.

How MACRS Works

The Modified Accelerated Cost Recovery System (MACRS) applies to all depreciable asset purchases made after December 31, 1986. Initially, MACRS was a double-declining balance system that switched to straight line after a few years. For purchases of farm and ranch assets made after December 31, 1988, though, MACRS employs a 150% depreciation system (non-farm assets still use double-declining balance) that later switches to straight line. Like ACRS, half the full year's allowance is built into the rates for the first year, regardless of when the property is purchased during the year. However, MACRS added a new twist, called the mid-quarter convention, which we will discuss later. Other choices are to select straight line depreciation over the alternate recovery period.

The same election must be made on all items in a given class (all assets that have the same depreciation period) purchased during the year. A list of agricultural

Table 4. ACRS Percentage Tables for 15-, 18-, and 19-year Property Classes

15-year real property (other than low-income housing)

	Month Placed in Service											
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1st	12%	11%	10%	9%	8%	7%	6%	5%	4%	3%	2%	1%
2nd	10%	10%	11%	11%	11%	11%	11%	11%	11%	11%	11%	12%
3rd	9%	9%	9%	9%	10%	10%	10%	10%	10%	10%	10%	10%
4th	8%	8%	8%	8%	8%	9%	9%	9%	9%	9%	9%	9%
5th	7%	7%	7%	7%	7%	8%	8%	8%	8%	8%	8%	8%
6th	6%	6%	6%	6%	7%	7%	7%	7%	7%	7%	7%	7%
7th	6%	6%	6%	6%	6%	7%	6%	6%	6%	6%	6%	6%
8th	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
9th	6%	6%	6%	6%	5%	6%	5%	5%	5%	6%	6%	6%
10th	5%	5%	5%	6%	5%	6%	5%	5%	5%	5%	6%	5%
11th	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
12th	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
13th	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
14th	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
15th	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
16th	—	—	1%	1%	2%	2%	3%	3%	4%	4%	4%	5%

18-year real property (placed in service after June 22, 1984)

	Month Placed in Service											
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1st	9%	9%	8%	7%	6%	5%	4%	4%	3%	2%	1%	0.4%
2nd	9%	9%	9%	9%	9%	9%	9%	9%	9%	10%	10%	10%
3rd	8%	8%	8%	8%	8%	8%	8%	8%	9%	9%	9%	9%
4th	7%	7%	7%	7%	7%	8%	8%	8%	8%	8%	8%	8%
5th	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
6th	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
7th	5%	5%	5%	5%	6%	6%	6%	6%	6%	6%	6%	6%
8th-12th	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
13th	4%	4%	4%	5%	4%	4%	5%	4%	4%	4%	5%	5%
14th-17th	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
18th	4%	3%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
19th	—	1%	1%	1%	2%	2%	2%	3%	3%	3%	3%	3.6%

19-year real property

	Month Placed in Service											
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1st	8.8%	8.1%	7.3%	6.5%	5.8%	5.0%	4.2%	3.5%	2.7%	1.9%	1.1%	0.40%
2nd	8.4%	8.5%	8.5%	8.6%	8.7%	8.8%	8.8%	8.9%	9.0%	9.0%	9.1%	9.2%
3rd	7.6%	7.7%	7.7%	7.8%	7.9%	7.9%	8.0%	8.1%	8.1%	8.2%	8.3%	8.3%
4th	6.9%	7.0%	7.0%	7.1%	7.1%	7.2%	7.3%	7.3%	7.4%	7.4%	7.5%	7.6%
5th	6.3%	6.3%	6.4%	6.4%	6.5%	6.5%	6.6%	6.6%	6.7%	6.8%	6.8%	6.9%
6th	5.7%	5.7%	5.8%	5.9%	5.9%	5.9%	6.0%	6.0%	6.1%	6.1%	6.2%	6.2%
7th	5.2%	5.2%	5.3%	5.3%	5.3%	5.4%	5.4%	5.5%	5.5%	5.6%	5.6%	5.6%
8th	4.7%	4.7%	4.8%	4.8%	4.8%	4.9%	4.9%	5.0%	5.0%	5.1%	5.1%	5.1%
9th	4.2%	4.3%	4.3%	4.4%	4.4%	4.5%	4.5%	4.5%	4.5%	4.6%	4.6%	4.7%
10th-19th	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%	4.2%
20th	0.2%	0.5%	0.9%	1.2%	1.6%	1.9%	2.3%	2.6%	3.0%	3.3%	3.7%	4.0%

assets and their ACRS, MACRS, and Alternate MACRS lives are presented in Table 5. Like ACRS, if you bought a tractor and installed a sprinkler irrigation system in the same year, you have to use the same recovery period and method for both. However, an item-by-item election can be made on real property. When 3-, 5-, or 7-year class assets are disposed of, any gain, to the extent of prior depreciation taken, is to be recaptured as ordinary income. Any gain in excess of prior depreciation is treated as capital gain. On real property, where the straight line method was used, all gain will be treated as capital gain. If the accelerated rates are used on non-residential property (e.g., a general purpose barn), any gain will be subject to recapture to the extent of depreciation taken. If the accelerated rates are used on residential property (e.g., a rented house), recapture as ordinary income will be limited to the extent that deductions exceed allowable deductions under the straight line method over the depreciation period.

Tables of percentages for 150% declining balance, straight line, and 200% declining balance scenarios are shown in Table 6 for 3-, 5-, and 7-year property, and in Table 7 for real property. Table 8 shows the Alternate MACRS percentages for several of the most often used recovery periods. The accelerated rates shown in the tables are spelled out in the law, so all you do is multiply them by your original basis.

Soil and Water Conservation Structures

Section 175 of the Internal Revenue Code provides favorable treatment for recovery of the cost of building soil and water conservation structures. That section allows farmers and ranchers to deduct the entire amount of direct expenditures for soil and water conservation on land used in farming in the year they were spent. There are only three hitches:

1. The expenses must have been incurred according to a conservation plan approved by the Soil Conservation Service (SCS).

Table 5. Recovery Period and Property Class for Agricultural Assets

	Property Class and Recovery Period		
Asset	**ACRS**	**MACRS**	**Alternate MACRS**
Airplane	5	5	6
Automobile (agricultural use)	3	5	5
All-terrain vehicles (agricultural use)	3	5	5
Calculators	5	5	6
Canals	5	15	20
Cattle (dairy or breeding)	5	5	7
Communication equipment (cellular phone, radio)	5	7	10
Computers, modems, and printers	5	5	5
Copiers	5	5	6
Cotton gin stands and equipment	5	7	12
Ditches (lined and unlined)	5	15	20
Equipment (feeders, saddles, scales, etc.)	5	7	10
Farm buildings (general purpose, i.e., sheds)	19	20	25
Fences (agricultural, including electric)	5	7	10
Fruit trees	5	10	20
Goats (breeding or milk)	3	5	5
Grain bins (feed and other bulk storage bins)	5	7	10
Helicopter (agricultural use)	5	5	6
Hogs (breeding)	3	3	3
Horses (non-race, less than 12 yr old)	5	7	10
Horses (non-race, 12 yr or older)	3	3	10
Housing (employee housing, summer cabins, and hunting lodges)	19	27.5	40
Irrigation equipment (checks, gates, etc.)	5	7	10
Livestock tanks (dirt and metal)	5	7	10
Logging equipment	5	5	6
Machinery (tractors, plows, motors, etc.)	5	7	10
Mobile homes	10	27.5	40
Nut trees	5	10	20
Office equipment, fixtures, and furniture (other than calculators, copiers, and typewriters)	5	7	10

Table 5. Recovery Period and Property Class for Agricultural Assets (continued)

Asset	Property Class and Recovery Period		
	ACRS	MACRS	Alternate MACRS
Paved lots	5	15	20
Pipe (gated)	5	7	10
Pipelines (aboveground and underground)	5	15	20
Real property (non-residential)	19	31.5	40
Rental property (residential)	19	27.5	40
Research property	5	5	12[a]
Roads (made for a specific purpose)	5	15	20
Sheep (breeding)	5	5	5
Silage pits	5	15	20
Single purpose horticulture structure	5	10[b]	15
(a greenhouse specifically designed, built, and used for the commercial production of plants or mushrooms)			
Single purpose livestock structure	5	10[b]	15
(any enclosure specifically designed, built, and used exclusively for: 1. Housing, raising, and feeding a particular type of livestock and its produce, i.e., milking parlors and most confinement hog and poultry facilities; and 2. storing the equipment necessary for the housing, raising, and feeding of this livestock. Livestock in this case includes poultry and excludes horses.)			
Soil and water conservation structures[c]	—	—	—
Solar property	5	5	12[a]
Sprinkler system	5	7	10
Storage (railroad cars or other storage bins)	5	7	10
Tile (drainage)	5	15	20
Tractor units for use over-the-road	3	3	4
Trailer units for use over-the-road	5	5	6
Transmitting towers (radio)	5	15	20
Truck (heavy duty, general use, 1 ton and up)	5	5	6
Truck (light duty, generally 1/2- and 3/4-ton)	3	5	5
Typewriter	5	5	5
Vines (vineyard)	5	10	20
Wells (casing, hole)	5	15	20
(motor, pump, etc.)	5	7	10
Wind energy property (windmills)	5	5	12[a]

[a]No class life specified. Therefore, default life assigned is 12 years.

[b]Seven years if placed in service prior to 1988.

[c]Consult your local Soil Conservation Service office for approval and guidelines concerning depreciation practices.

Table 6. Depreciation Percentage Figures for 3-, 5-, and 7-year Property; 150% Declining Balance, Straight Line, and 200% Declining Balance Half-Year Convention*

150% Declining Balance				Straight Line				200% Declining Balance			
Year	3-year	5-year	7-year	Year	3-year	5-year	7-year	Year	3-year	5-year	7-year
1	25.00%	15.00%	10.71%	1	16.67%	10.00%	7.14%	1	33.33%	20.00%	14.29%
2	37.50%	25.50%	19.13%	2	33.33%	20.00%	14.29%	2	44.45%	32.00%	24.49%
3	25.00%	17.85%	15.03%	3	33.33%	20.00%	14.29%	3	14.81%	19.20%	17.49%
4	12.50%	16.66%	12.25%	4	16.67%	20.00%	14.28%	4	7.41%	11.52%	12.49%
5		16.66%	12.25%	5		20.00%	14.29%	5		11.52%	8.93%
6		8.33%	12.25%	6		10.00%	14.28%	6		5.76%	8.92%
7			12.25%	7			14.29%	7			8.93%
8			6.13%	8			7.14%	8			4.46%

*For mid-quarter tables, consult IRS Publication 534.

Table 7. Depreciation Figures for Non-Residential Real Property; Straight Line Over 31.5 Years; Mid-Month Convention

	Month Placed in Service											
Year	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1	3.042%	2.778%	2.513%	2.249%	1.984%	1.720%	1.455%	1.190%	0.926%	0.661%	0.397%	0.132%
2-7	3.175%	3.175%	3.175%	3.175%	3.175%	3.175%	3.175%	3.175%	3.175%	3.175%	3.175%	3.175%
8	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.175%	3.175%	3.175%	3.175%	3.175%
9	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
10	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
11	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
12	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
13	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
14	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
15	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
16	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
17	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
18	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
19	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
20	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
21	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
22	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
23	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
24	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
25	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
26	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
27	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
28	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
29	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
30	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
31	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%	3.175%
32	1.720%	1.984%	2.249%	2.513%	2.778%	3.042%	3.175%	3.174%	3.175%	3.174%	3.175%	3.174%
33	—	—	—	—	—	—	0.132%	0.398%	0.661%	0.926%	1.190%	1.455%

Table 8. Alternate MACRS Percentages for Most Used Recovery Periods; Half-Year Convention

	Recovery Period in Years							
Year	**3**	**4**	**5**	**6**	**7**	**10**	**15**	**20**
1	16.67%	12.50%	10.00%	8.33%	7.14%	5.00%	3.33%	2.50%
2	33.33%	25.00%	20.00%	16.67%	14.29%	10.00%	6.67%	5.00%
3	33.33%	25.00%	20.00%	16.67%	14.29%	10.00%	6.67%	5.00%
4	16.67%	25.00%	20.00%	16.67%	14.28%	10.00%	6.67%	5.00%
5	—	12.50%	20.00%	16.67%	14.29%	10.00%	6.67%	5.00%
6	—	—	20.00%	16.67%	14.28%	10.00%	6.67%	5.00%
7	—	—	—	8.33%	14.29%	10.00%	6.67%	5.00%
8	—	—	—	—	7.14%	10.00%	6.66%	5.00%
9	—	—	—	—	—	10.00%	6.67%	5.00%
10	—	—	—	—	—	10.00%	6.66%	5.00%
11	—	—	—	—	—	50.00%	6.67%	5.00%
12	—	—	—	—	—	—	6.66%	5.00%
13	—	—	—	—	—	—	6.67%	5.00%
14	—	—	—	—	—	—	6.66%	5.00%
15	—	—	—	—	—	—	6.67%	5.00%
16	—	—	—	—	—	—	3.33%	5.00%
17	—	—	—	—	—	—	—	5.00%
18	—	—	—	—	—	—	—	5.00%
19	—	—	—	—	—	—	—	5.00%
20	—	—	—	—	—	—	—	5.00%
21	—	—	—	—	—	—	—	2.50%

Table 9. Depreciation Analysis of Asset Purchase 6

Asset 6 Various ACRS and MACRS Alternatives

Purchase Price: $50,000; Property Class: 5-yr ACRS, 7-yr MACRS, and 10-yr Alternate MACRS

	ACRS		MACRS 200%		MACRS 150%		Alternate MACRS	
Year	**Percent**	**Depreciation**	**Percent**	**Depreciation**	**Percent**	**Depreciation**	**Percent**	**Depreciation**
19X1	15%	$7,500	14.29%	$7,145	10.71%	$5,355	5%	$2,500
19X2	22%	$11,000	24.49%	$12,245	19.13%	$9,565	10%	$5,000
19X3	21%	$10,500	17.49%	$8,745	15.03%	$7,515	10%	$5,000
19X4	21%	$10,500	12.49%	$6,245	12.25%	$6,125	10%	$5,000
19X5	21%	$10,500	8.93%	$4,465	12.25%	$6,125	10%	$5,000
19X6	—	—	8.92%	$4,460	12.25%	$6,125	10%	$5,000
19X7	—	—	8.93%	$4,465	12.25%	$6,125	10%	$5,000
19X8	—	—	4.46%	$2,230	6.13%	$3,065	10%	$5,000
19X9	—	—	—	—	—	—	10%	$5,000
19Y0	—	—	—	—	—	—	10%	$5,000
19Y1	—	—	—	—	—	—	5%	$2,500
Total Depreciation		**$50,000**		**$50,000**		**$50,000**		**$50,000**

2. The deduction is subject to a limitation of 25% of gross income from farming (see the Farmer's Tax Guide for more details).

3. The deduction applies only to non-depreciable items.

An IRS regulation states, reasonably clearly, that all earthen structures (ditches, dams, terraces, watercourses, ponds) are not depreciable and, therefore, may be deducted in the year of construction. In fact, if they are not expensed, they may not be depreciated and rather must be added to the basis (i.e., the original purchase price) of the land. On the other hand, if any masonry, concrete, tile, metal, or wood (and presumably PVC) is used in the structure, the structure must be depreciated over the life established by SCS guidelines for the useful life of the structure.

Numerical Examples

To illustrate the mechanics of ACRS and MACRS, consider the following example asset purchases 6 and 7 (the same assets as example purchases 1 and 2, except salvage value and useful life are no longer specified).

Asset Purchase 6
Tractor purchased for $50,000 on January 1, 19X1.

Asset Purchase 7
Truck purchased for $20,000 on July 1, 19X1.

Under ACRS, the tractor fell into the 5-year asset class and the light-duty truck was a 3-year asset. Under MACRS, the tractor qualifies for the 7-year asset class and the truck falls into the 5-year class. Finally, for the alternate MACRS system, the tractor's recovery period is 10 years and the truck's is 5 years. Tables 9 and 10 present the depreciation allowed for each asset under several situations: ACRS, MACRS 200% (1986-88), MACRS 150% (1989-present), and Alternate MACRS. The percentage amounts shown in Tables 9 and 10 were taken from Tables 3, 4, 6, and 7.

Mid-Quarter MACRS Convention

The Tax Reform Act of 1986 introduced a new twist for 1986 and succeeding years, in addition to the general MACRS methods. To curb what were felt to be abuses of the mid-year convention, Congress added the mid-quarter convention. Remember, the mid-year convention allows (in fact requires) that one half year's depreciation be claimed in the year of purchase, regardless of the exact date of purchase. The abuses were perceived to come from businesses that purchased all of their assets in late December. In fact, this has always been a widely used tax management tool, especially for farmers and ranchers, but it was made more valuable with the mandatory use of the mid-year convention.

To disallow this possibility of sheltering large amounts of income by using year-end depreciable asset purchases, the Internal Revenue Code now specifies that the mid-quarter system be used if 40% of the year's

Table 10. Depreciation Analysis of Asset Purchase 7

Asset 7 Various ACRS and MACRS Alternatives

Purchase Price: $20,000; Property Class: 3-yr ACRS, 5-yr MACRS, and 5-yr Alternate MACRS

	ACRS		MACRS 200%		MACRS 150%		Alternate MACRS	
Year	Percent	Depreciation	Percent	Depreciation	Percent	Depreciation	Percent	Depreciation
19X1	25%	$5,000	20%	$4,000	15%	$3,000	10%	$2,000
19X2	38%	$7,600	32%	$6,400	25.5%	$5,100	20%	$4,000
19X3	37%	$7,400	19.2%	$3,840	17.85%	$3,570	20%	$4,000
19X4	—	—	11.52%	$2,304	16.66%	$3,332	20%	$4,000
19X5	—	—	11.52%	$2,304	16.66%	$3,332	20%	$4,000
19X6	—	—	5.76%	$1,152	8.33%	$1,666	10%	$2,000
Total Depreciation		**$20,000**		**$20,000**		**$20,000**		**$20,000**

total depreciable asset purchases were made in the last 3 months of the business year. An example can help explain this. Assume Farmer X, a calendar-year taxpayer, buys three assets during the year:

Asset	Purchase Price	Purchase Date
1. Tractor	$50,000	March 1
2. Swather	$50,000	September 30
3. Grain Bin	$50,000	December 15
	$150,000	

Only $50,000, or 33% of the $150,000 total of new assets, were purchased in the last quarter of the year, which is less than the 40% cutoff level. Consequently, the mid-quarter convention does not apply and we revert to the mid-year convention. Because all three assets are in the 7-year class, $16,065 of the depreciation would be claimed in the year of purchase under the 150% MACRS system.

Sometimes, just 1 day can make a big difference. If Farmer X had purchased the swather on October 1 rather than September 30, the results would be entirely different. If the swather was purchased October 1, then $100,000, or 67%, of total asset purchases, were made during the last quarter and the mid-quarter convention applies.

This mid-quarter convention assumes one of four purchase dates applies to each asset (just as the mid-year convention assumes a July 1 purchase date for all assets). Then it adjusts the first year depreciation claim according to the figures in Table 11. The depreciation claim for each following year is also changed. To compute the depreciation claimed in years after the year of purchase, consult IRS publication 534 (Tables 2 through 5 for MACRS and Tables 15 through 18 for Alternate MACRS in the 1990 version).

Table 11. Mid-Quarter Convention Dates and Percentages*

Actual Purchase Date	Assumed Purchase Date	Percentage
Jan. 1 - March 31	Feb. 15	87.5%
April 1 - June 30	May 15	62.5%
July 1 - Sept. 30	Aug. 15	37.5%
Oct. 1 - Dec. 31	Nov. 15	12.5%

* Adjust these dates for a fiscal year other than the calendar year.

Consider the adjusted Farmer X example (Table 12) to compute the allowed depreciation.

Other Depreciation Issues

Several additional components of the overall depreciation/cost recovery system need to be addressed, not with the intent of adding unnecessary complication to an already overly complex system, but rather to highlight one more significant tax management opportunity and a few potentially troublesome topics.

Depreciation Is Not an Option

The Internal Revenue Code and all accompanying regulations and rulings relate to the depreciation "allowed or allowable," not the amount that you may wish to claim or actually report on a tax return. The IRS (and the law) has made it clear: depreciation is not an option; if available, you must claim it. While this point may seem silly on the surface, there are at least two real instances in which the issue arises. Consider a business with a low profit (or maybe even a loss) for the year, before depreciation is deducted. Why not save our depreciation deduction for a later year when it can do some good? Even though we might find ourselves in a situation like this, we must claim the depreciation deduction. If we don't,

Table 12. Example of Depreciation Adjusted According to Mid-Quarter Convention

Asset	Purchase Date	Purchase Price	Full-Year 150% MACRS	%	Depreciation
Tractor	3-1	$100,000	1.5/7 x $50,000 = $10,714	87.5	$9,375
Swather	10-1	$50,000	1.5/7 x $50,000 = $10,714	12.5	$1,339
Grain Bin	12-15	$50,000	1.5/7 x $50,000 = $10,714	12.5	$1,339
Total					$12,053

when we sell the asset, we must compute the depreciation allowable, not the depreciation actually claimed, to compute any gain on the sale of the asset. Secondly, consider the tax practitioner who never depreciated a depreciable asset. When sold, the amount of depreciation that was allowed must again be used to compute gain on the sale.

Inexpensive Items

The Internal Revenue Code is quite specific that a business asset with a useful life greater than 1 year must be depreciated. But practicality must enter the decision of when to depreciate and when to outright expense the purchase of an asset. Just think of a purchase of a set of good quality screwdrivers. Will their useful life exceed 1 year? Probably so, but their purchase price is under, say, $25. It seems ridiculous to have to depreciate every pair of pliers, every hand tool, and so on.

While the law is silent on this matter, most tax practitioners will use a cutoff level of $100 or $200 to establish an admittedly arbitrary, but practical, rule for determining whether to depreciate.

Partial Business Use

If an asset is used for both business and nonbusiness purposes (an issue that arises often with respect to a home office, or a car or pickup, among others), only the portion of the asset used for business purposes is depreciable. Appropriate records (such as mileage logs) must be maintained to substantiate the business portion amount. For example, if 20% of the floor space of a personal residence is used exclusively for a business office, then 20% of the residence is depreciable (and 20% of the insurance, utilities, and other costs are deductible as business expenses). Alternatively, if 10% of the miles a pickup was used for during the year were for fishing trips, only 90% of the pickup is depreciable.

Conversion of Personal Assets to Business Use

Almost always upon beginning a new business, and often during the course of a continuing existing business, an asset will be converted from purely personal use to either partial or entire business use. Of course, a personal asset is not depreciable and a business asset is, so when the conversion to business use takes place, the business owner can (and must) begin to claim a depreciation deduction. This issue arises most often with respect to a pickup, car, riding lawnmower, or room in the personal residence when converted to business use, and also when a hobby is turned into a for-profit business.

The depreciation deduction on an asset converted from personal to business use is computed in the same fashion as an asset originally purchased for business use. The problem arises in determining basis. The basis amount is the lower of the fair market value of the asset on its date of conversion to business use or the adjusted basis of the asset (its purchase price plus any additions).

Section 179 Deduction

Before the Economic Recovery Tax Act of 1981 was enacted, the Internal Revenue Code allowed businesses to deduct an amount of depreciation over and above the amount computed through regular application of the depreciation formulas. This additional amount, meant to serve as an additional incentive for businesses to invest in productive assets, was called Additional First Year (AFY) depreciation. In 1981, AFY was dropped, but the concept, if not the mechanics, was reinstated through Section 179 of the Internal Revenue Code.

Section 179 in 1981 allowed a business to deduct up to $10,000 of depreciable asset purchases (in the year of purchase) before normal depreciation deductions are computed. In 2011, the deduction is $500,000 with a dollar limit of qualifying purchases of a maximum of $2,500,000. There are, however, a few limitations to this Section 179 deduction. First, the maximum deduction available is limited to the taxable income from the conduct of a trade or business; in other words, the Section 179 deduction cannot be used to create a net operating loss. Secondly, the $500,000 absolute maximum applies to the individual, not to the business. For example, if a taxpayer owns two or more businesses, a $500,000 Section 179 deduction cannot be claimed for each business; rather, the $500,000 limit applies to the aggregation of all of the businesses. Thirdly, if the taxpayer purchases more than $2,500,000 of qualifying

Table 13. Section 179 Deduction Analysis

Purchase Price: $50,000; Property Class: 7-yr MACRS				
Year	**With Section 179**		**Without Section 179**	
19X1	Section 179	$10,000	Section 179	$0
19X1	10.71% x $40,000	$4,284	10.71% x $50,000	$5,355
19X2	19.13% x $40,000	$7,652	19.13% x $50,000	$9,565
19X3	15.03% x $40,000	$6,012	15.03% x $50,000	$7,515
19X4	12.25% x $40,000	$4,900	12.25% x $50,000	$6,125
19X5	12.25% x $40,000	$4,900	12.25% x $50,000	$6,125
19X6	12.25% x $40,000	$4,900	12.25% x $50,000	$6,125
19X7	12.25% x $40,000	$4,900	12.25% x $50,000	$6,125
19X8	6.13% x $40,000	$2,452	6.13% x $50,000	$3,065
Total		**$50,000**		**$50,000**

property, the $500,000 is reduced on a dollar-for-dollar basis over the $2,500,000 maximum. In other words, a maximum of $500,000 is available for any amount of purchases up to $2,500,000, $500,000 would be available if purchases totaled $2,000,000, and no Section 179 deduction would be available for a business whose purchases totaled $2,500,000 or more.

Finally, not all depreciable assets qualify. General-purpose structures (barns, storage sheds, hay sheds) and most real property, other than single-purpose livestock or horticultural structures, will not qualify for a Section 179 deduction. The Section 179 deduction is an option, **not** a requirement. Use or ignore it as best suits your business. In the long run, no additional depreciation may be claimed because the Section 179 amount is deducted from the purchase price to compute the adjusted basis for normal depreciation purposes. Consider an example tractor costing $50,000. Table 13 shows how the Section 179 election affects the depreciation allowed under MACRS.

Choosing an Alternative

Alternatives under the new system are much more limited in number, the differences between them are greater, and the choices may be more critical. If you are in a higher tax bracket than you expect to be in later years, you might choose the accelerated rate option because a faster depreciation method will result in earlier tax savings. Alternatively, if you expect a higher marginal tax bracket later, a longer straight line recovery period might be elected.

Over the years, if you have a substantial list of depreciable items and tend to replace about the same amount each year, the difference in depreciation from year to year may be rather minor. However, there is still the time value of money, the economic advantage of having use of the money from taxes saved in future years, which may cause you to use a faster recovery or depreciation procedure. Keep in mind that faster depreciation reduces basis more rapidly. If the item is traded for another, it leaves a smaller depreciable basis on the replacement. If the item is sold and is depreciable personal property, the gain on the sale (selling price less basis) is recaptured as ordinary income to the extent of depreciation allowed or allowable; the rest is capital gain. To illustrate, take an example and compare the alternatives available for 7-year property after 8 years, on a $10,000 machine.

	Accelerated Rate	Alternate MACRS Straight-Line Rate
After 8 years	(7-year)	(10-year)
Depreciation to date	$10,000	$7,500
Remaining basis	$0	$2,500

If you sold the machine for $6,000, you would have some taxable ordinary gain (or loss):

	Accelerated Rate	Alternate MACRS Straight-Line Rate
After 8 years	(7-year)	(10-year)
Gain on sale for $6,000	$6,000	$3,500

If you traded the machine for a replacement and paid an additional $6,000 cash boot, the basis for your new machine would be:

	Accelerated Rate	Alternate MACRS Straight-Line Rate
Basis with $6,000 boot	$6,000	$8,500

WHAT STRATEGY TO USE UNDER MACRS?

All of the recent rule changes indicate a need to evaluate your depreciation strategy. The basic principles have not changed, but as we said earlier, the alternatives are fewer and the differences between them are greater, so the choices are more critical. Remember, all items in a class have to be treated identically, so a new corn planter and a grain storage bin both have to be depreciated using the same method. Also remember that there is now only a half-year depreciation in the year of acquisition, and none in the year of disposition, whether the transaction was on January 1 or December 31.

The first and most basic questions is still, "Do you need the item?"

1. If your use pattern, cash flow, and financial statements don't all agree it's time to trade, then all the other tax questions are irrelevant. There may be a more implicit, misguided incentive under the new law to replace faster than needed. For example, the machine is still serviceable after 7 years, but you're out of depreciation and might be encouraged to trade before it is profitable considering all factors, just to avoid income taxes.
2. The value of time lost in the field, the potential for high repair costs on the old machine, and the value of technological improvements in the new machine all need to be put into perspective and brought into the decision of whether to purchase.

3. If you can profitably use the new item, it is time to bring in other considerations such as current and future tax bracket, cost of money, and the need for added tax deductions. As you consider, keep in mind that investment credit is much more valuable in offsetting taxes than is depreciation, even if you're in the highest tax brackets.

4. Never buy a depreciable asset during the fourth quarter of the year without consulting your tax advisor first. Don't let your taxes tell you whether the asset is needed, but delaying or accelerating purchases can have profound tax impacts.

Once you've decided and made the purchase or trade, you still have some important decisions in developing or applying a strategy of depreciation. The following are some general suggestions.

If you're in a high tax bracket and expect to be for the next year or two, you may want to choose the accelerated method, even in a year of large purchases. You may then go into a holding pattern on replacements for a few years until you need the depreciation (and the machinery). If cash allows, you could replace a little sooner.

What alternative should you choose, for example, when you overhaul a tractor, which you expect to keep for another 5 years, for $5,000 and install $35,000 worth of concrete ditches that should last for 20 years? If you can use the deduction and are in a relatively high tax bracket, you may want to use a relatively fast method, given some time value of money.

Carefully study the question of being able to use all the rapid depreciation in the next few years, as well as in the year of purchase.

You probably should try to develop a multiple-year strategy. If you use the accelerated method, there is a large tax break in the initial year. There's an even larger depreciation deduction in the second year than in the first (of course, you don't have the investment credit). Some planning beyond the current year may be more critical now, to avoid or at least prepare for such things as a net operating loss. This could occur in the case where you make a big investment and use the 7-year rapid method, then the next year have a bad crop, and as a result, little net income before depreciation deductions, but still have that large depreciation amount in the second year. You no longer have the option of switching to a slower depreciation method in a later year. It all hinges on the initial decision.

At this time, it seems best to use straight line recovery on buildings and other real property. The recapture of all depreciation as ordinary income when sold makes using the accelerated rate much less attractive. Also, use of accelerated rates on real property may result in payment of the alternative minimum tax.

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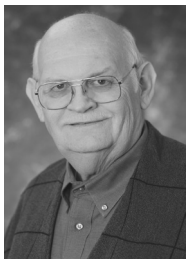

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